QCD Meeting 8/22/02

1. Special guest talk: "Two new QCD issues for Run II"

   Giuseppe (Pino) Marchesini

2. Thinking about a figure of merit for jet algorithms Bruce Knuteson (then he goes back to sleep) 10'

3. News/announcements

Run 1 Preblessing

4. K_s^0/Lambda production Niccolo Moggi 30'

Run 1 (Re)blessing

5. A few plots and numbers for the Roman pot central gap analysis   Mary Convery 20'

Run 2 proposal

6. Low mass exclusive double Pomeron exchange

   Mike Albrow   20'

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Papers of the Week

- **hep-ph/0206076;** Away-from-jet energy flow

  Authors: A. Banfi, G. Marchesini, G. Smye

  We consider interjet observables in hard QCD processes given by the energy flow $\Eout$ in a region away from all hard jets. Here the QCD radiation is depleted ($\Eout \ll Q$), and therefore these observables provide ideal means to study non-perturbative effects. We derive an evolution equation (in the large N_c limit) which resums, for large $Q/\Eout$, all leading terms arising from large angle soft emission (double logarithms are absent). We discuss the analytical features of the result and identify universal and geometry-dependent contributions. Our analysis confirms features found using numerical methods by Dasgupta and Salam.

Papers of the Week

- **hep-ph/0208156;** MadEvent: Automatic Event Generation with MadGraph

  Authors: Fabio Maltoni, Tim Stelzer

  We present a new multi-channel integration method and its implementation in the multi-purpose event generator MadEvent, which is based on MadGraph. Given a process, MadGraph automatically identifies all the relevant subprocesses, generates both the amplitudes and the mappings needed for an efficient integration over the phase space, and passes them to MadEvent. As a result, a process-specific, stand-alone code is produced that allows the user to calculate cross sections and produce unweighted events in a standard output format. Several examples are given for processes that are relevant for physics studies at present and forthcoming colliders.

Upcoming Talks

- We are still seeking a speaker for

"Measurements of diffractive processes at CDF"

at the Hadron Collider Physics 2002 conference in Karlsruhe, Germany (Sep 29 - Oct 4).

If you are interested please send e-mail to the speakers committee (cdf_speakers@fnal.gov), and to Joey and Jay.

Upcoming meeting with CDF/D0/theorists

- Oct 2 or 4; purpose:
  - Common MC tunings
  - ME/MC comparisons and what else is needed
  - Practical pdf uncertainties
  - Practical jet algorithms

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Jet Algorithms

Compare Snowmass to Various Cone Jet Algorithms

Cross sections with CTEQ4M, $\sqrt{s} = 1800$ GeV, R = 0.7, Rsep/R = 1.3

Snowmass reference = Snowmass cone, $P_J = E_T$ (Snowmass)

4-vector cone, $P_J = P_T$ (4 vector)
Snowmass cone, $P_J = E_T$ (CDF - 4 vector)
4-vector cone, $P_J = E_T$ (CDF - 4 vector)

CDF Run 1

D0 Run 1

CDF/D0 Run 2

(Algorithm -Snowmass)/Snowmass

P_J (GeV)

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